

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1. (previously presented) A voice portal hosting system,
2 intended to be connected to a first voice telecommunication
3 network in order for a plurality of users in said network to
4 establish a connection with said system using voice equipment,
5 said system comprising:
6 a memory in which a plurality of interactive voice response
7 applications providing interactive voice response
8 functionality is stored, each of said applications
9 including an executable component for execution by
10 said hosting system;
11 a common speech recognition module;
12 means for storing a plurality of user-specific speech
13 models adapted to specific users for use by the common
14 speech recognition module;
15 a user identification module for identifying a user;
16 means for retrieving the user-specific speech model of the
17 identified user from said plurality of models;
18 and
19 uploading means for independently uploading said plurality
20 of interactive voice response applications, to said
21 system, by a plurality of independent value-added
22 service providers, wherein
23 the identified user interacts with one or more of said
24 interactive voice response applications, and wherein

25 said one or more interactive voice response applications
26 utilize said retrieved user-specific speech model via
27 said common speech recognition module for recognizing
28 speech of the identified user, wherein each of said
29 interactive voice response applications includes an
30 executable component for execution by said hosting
31 system, said executable component comprising at least
32 one of an executable file, a Java Bean, a Corba-
33 component, a compiled software module, and a pre-
34 compiled software module.
35

1 2. (original) The voice portal hosting system of claim 1,
2 wherein said common speech recognition module comprises a common
3 user profile database.

1 3. (original) The voice portal hosting system of claim 2,
2 wherein said common user profile database includes user
3 preferences.

1 4. (original) The voice portal hosting system of claim 3,
2 wherein said user preferences include a delivery address for
3 goods and/or services ordered with said value-added service
4 providers.

1 5. (original) The voice portal hosting system of claim 3,
2 wherein said user preferences include a billing address and/or
3 preferences for goods and services ordered with said value-added
4 service providers.

1 6. (canceled).

1 7. (original) The voice portal hosting system of claim 6,
2 comprising means for adapting said common speech models
3 associated to a user during each dialogue between said user and
4 each of said interactive voice response applications.

1 8. (original) The voice portal hosting system of claim 7,
2 wherein said means for adapting said common speech models uses
3 recorded users' speech samples for adapting said common speech
4 models off-line.

1 9. (original) The voice portal hosting system of claim 1,
2 wherein said common speech recognition module uses Hidden Markov
3 Models, and further comprising a Hidden Markov Models adaptation
4 module for adapting said models to said user.

1 10. (original) The voice portal hosting system of claim 9,
2 wherein said Hidden Markov Models adaptation module allows for
3 an incremental adaptation of said models.

1 11. (original) The voice portal hosting system of claim 1,
2 wherein said common speech recognition module uses user-specific
3 language models.

1 12. (original) The voice portal hosting system of claim 11,
2 comprising means for adapting said common language models
3 associated to a user during each dialogue between said user and
4 each of said interactive voice response applications.

1 13. (original) The voice portal hosting system of claim 1,
2 wherein said common speech recognition module uses selections
3 previously made by said users.

1 14. (previously presented) The voice portal hosting system
2 of claim 13, wherein said selections previously made by said
3 users are stored in said voice portal hosting system for
4 improving the arborescence of the menus.

1 15. (original) The voice portal hosting system of claim 1,
2 wherein at least a plurality of said interactive voice response
3 applications use a common user identification module run on said
4 system.

1 16. (original) The voice portal hosting system of claim 15,
2 wherein said user identification module uses an identification
3 of the equipment used by said user in said first
4 telecommunication network.

1 17. (original) The voice portal hosting system of claim 16,
2 being operated by a telecom operator of said first
3 telecommunication network, wherein said user identification
4 module uses an identification of the equipment used by said user
5 in said first telecommunication network even when said
6 identification is not available for the other B-subscribers of
7 said first telecommunication network.

1 18. (original) The voice portal hosting system of claim 15,
2 wherein said user identification module uses a voice-based user
3 identification module.

1 19. (original) The voice portal hosting system of claim 15,
2 wherein said common speech recognition module uses a speaker-
3 dependant speech recognition algorithm, wherein said speaker is
4 identified by said common user identification module.

1 20. (original) The voice portal hosting system of claim 1,
2 wherein at least a plurality of said interactive voice response
3 applications use a common billing module and a common clearing
4 center for dispatching the collected amounts to said value-added
5 service providers.

1 21. (original) The voice portal hosting system of claim 20,
2 wherein said common billing module allows for the billing of
3 transactions between said users and said value-added service
4 providers on a common bill prepared by the operator of said
5 voice portal hosting system.

1 22. (original) The voice portal hosting system of claim 20,
2 wherein at least a plurality of said users have a deposit
3 account on said voice portal hosting system which can be used
4 for transactions with a plurality of said value-added service
5 providers.

1 23. (original) The voice portal hosting system of claim 1,
2 wherein at least a plurality of said interactive voice response
3 applications use a user authentication module based on an
4 electronic signature and/or on biometric parameters of said
5 users.

1 24. (original) The voice portal hosting system of claim 1,
2 wherein said second telecommunication network is a TCP/IP
3 network.

1 Claim 25 (canceled).

1 26. (original) The voice portal hosting system of claim 25,
2 wherein a compilation module run on said system compiles said
3 interactive voice response applications.

1 27. (original) The voice portal hosting system of claim 1,
2 wherein at least one free interactive voice response application
3 is made available by the operator of said system.

1 28. (original) The voice portal hosting system of claim 27,
2 wherein said free interactive voice response application
3 includes a free directory assistance service.

1 29. (canceled).

1 30. (previously presented) A method for allowing each of a
2 plurality of value-added service providers to set up an
3 interactive voice response application including an executable
4 component for execution by a voice portal hosting system
5 commonly used by said plurality of value-added service
6 providers, said voice response application for being used by a
7 plurality of users, comprising the steps of:

8 storing a plurality of user-specific speech models adapted
9 to specific users for use by a common speech
10 recognition module;

11 identifying a user calling said system;
12 retrieving the user-specific speech model of the identified
13 user from said plurality of models;
14 independently uploading, to said system, said interactive
15 voice response applications which provide interactive
16 voice response functionality;
17 the identified user interacting with one or more of said
18 interactive voice response applications; and
19 said one or more of said interactive voice response
20 applications using said retrieved user-specific speech
21 model via said common speech recognition module for
22 executing on said hosting system for recognizing
23 speech of the identified user, wherein said
24 interactive voice response applications include an
25 executable component for execution by said hosting
26 system, said executable component comprising at least
27 one of an executable file, a Java Bean, a Corba-
28 component, a compiled software module, and a pre-
29 compiled software module.

1 31. (original) The method of claim 30, wherein said
2 interactive voice response applications use a common user
3 profile database stored in said voice portal hosting system.

1 32. (original) The method of claim 31, wherein said
2 interactive voice response applications use user preferences
3 stored in said common user profile database.

1 33. (original) The method of claim 32, wherein said user
2 preferences include a delivery address for goods and/or services
3 ordered with said value-added service providers.

1 34. (original) The method of claim 33, wherein said user
2 preferences include a billing address and/or preferences for
3 goods and/or services ordered with said value-added service
4 providers.

1 35. (original) The method of claim 34, wherein said common
2 speech recognition module uses common users' speech models.

1 36. (original) The method of claim 35, wherein said common
2 speech models associated to a user are adapted during each
3 dialogue between said users and each of said interactive voice
4 response applications.

1 37. (original) The method of claim 30, wherein said common
2 speech recognition module uses common users' language models.

1 38. (original) The method of claim 37, wherein said common
2 language models associated to a user are adapted during each
3 dialogue between said user and each of said interactive voice
4 response applications.

1 39. (original) The method of claim 30, wherein at least a
2 plurality of said interactive voice response applications uses a
3 common user identification module run on said system.

1 40. (original) The method of claim 39, wherein said user
2 identification module uses an identification of the equipment
3 used by said user in said first telecommunication network.

1 41. (original) The method of claim 40, wherein said voice
2 portal hosting system is operated by a telecom operator of said
3 first telecommunication network, wherein said user
4 identification module uses an identification of the equipment
5 used by said user in said first telecommunication network even
6 when said identification is not available for the other B-
7 subscribers of said first telecommunication network.

1 42. (original) The method of claim 39, wherein said user
2 identification module uses a voice-based speaker identification
3 module.

1 43. (original) The method of claim 39, wherein said common
2 speech recognition module uses a speaker-dependant speech
3 recognition algorithm, said user being identified by said common
4 user identification module.

1 44. (original) The method of claim 30, wherein at least a
2 plurality of said interactive voice response applications use a
3 common billing module and a common clearing center for
4 dispatching the collected amounts to said value-added service
5 providers.

1 45. (original) The method of claim 44, wherein said common
2 billing module allows for the billing of transactions between
3 said users and said value-added service providers on a common

4 bill prepared by the operator of said voice portal hosting
5 system.

1 46. (original) The method of claim 44, wherein at least a
2 plurality of said users have a deposit account on said system
3 which can be used for transactions with a plurality of said
4 value-added service providers.

1 47. (original) The method of claim 30, wherein at least a
2 plurality of said interactive voice response applications use a
3 user authentication module based on an electronic signature
4 and/or on biometric parameters of said users.

1 48. (original) The method of claim 30, wherein at least
2 some of said interactive voice response applications are
3 described with Voice extensible Markup Language documents.

1 49. (original) The method of claim 48, wherein a
2 compilation module run on said voice portal hosting system
3 compiles said interactive voice response applications.

1 50. (previously presented) A method for allowing each of a
2 plurality of independent value-added service providers to set up
3 an interactive voice response applications each including an
4 executable component for execution by a voice portal hosting
5 system commonly used by said plurality of value-added service
6 providers and which can be used by a plurality of users, said
7 method comprising the steps of:

8 independently uploading, through a second telecommunication
9 network, said interactive voice response applications

10 to said system for providing interactive voice
11 response functionality,
12 storing a plurality of user-specific speech models adapted
13 to specific users for use by a common speech
14 recognition module,
15 identifying a user calling said system,
16 retrieving the user-specific speech model of the identified
17 user from said plurality of models,
18 and
19 executing one or more of said voice response applications
20 in response to the user calling said system, said
21 executing including interacting with said user via
22 said common speech module using said retrieved user-
23 specific speech model for recognizing the speech of
24 the user, wherein
25 said interactive voice response applications include an
26 executable component for execution by said hosting
27 system, said executable component comprising at least
28 one of an executable file, a Java Bean, a Corba-
29 component, a compiled software module, and a pre-
30 compiled software module, and wherein
31 said common speech models are adapted during each dialogue
32 between said users and any of said interactive voice
33 response applications.

1 51. (previously presented) A computer readable medium
2 storing a Computer program product comprising software code
3 portions for performing the steps of one of the claims 30 to 50
4 for execution on a server connected to a first telecommunication
5 network.

1 52. (previously presented) A voice portal hosting system
2 allowing a plurality of users to establish a connection with
3 said system using voice equipment for interacting with one or
4 more of a plurality of service providers, said system
5 comprising:

6 means for independently uploading a plurality of
7 interactive voice response applications from said
8 service provider, to said system, via a communication
9 channel, each of said voice response applications for
10 providing interactive voice response functionality for
11 a corresponding one of said service providers when
12 executed by said hosting system, wherein said
13 interactive voice response applications include an
14 executable component for execution by said hosting
15 system, said executable component comprising at least
16 one of an executable file, a Java Bean, a Corba-
17 component, a compiled software module, and a pre-
18 compiled software module;
19 means for storing said plurality of interactive voice
20 response applications;
21 a common speech recognition module;
22 means for storing a plurality of user-specific speech
23 models adapted to specific users for use by the common
24 speech recognition module;
25 a user identification module for identifying a user calling
26 said system via another communication channel;
27 means for retrieving the user-specific speech model of the
28 identified user from said plurality of models, wherein

29 the identified user interacts with one or more of said
30 interactive voice response applications, and wherein
31 said one or more interactive voice response applications
32 utilize said retrieved user-specific speech model via
33 said common speech recognition module for recognizing
34 speech of the identified user, and further wherein
35 said common speech models are adaptable during dialogue
36 between said users and any of said interactive voice
37 response applications.

1 53. (previously presented) A voice portal hosting system,
2 intended to be connected to a first voice telecommunication
3 network in order for a plurality of users in said network to
4 establish a connection with said system using voice equipment,
5 said system comprising:
6 a memory in which a plurality of interactive voice response
7 applications providing interactive voice response
8 functionality is stored, each of said applications
9 including an executable component for execution by
10 said hosting system;
11 a common speech recognition module;
12 means for storing a plurality of user-specific speech
13 models adapted to specific users for use by the common
14 speech recognition module;
15 a user identification module for identifying a known user
16 or a new user;
17 means for retrieving the user-specific speech model of the
18 known user from said plurality of models;
19 means for updating said user-specific speech models to the
20 new user without using any training phase;

21 and
22 uploading means for independently uploading said plurality
23 of interactive voice response applications, to said
24 system, by a plurality of independent value-added
25 service providers, wherein
26 the identified user interacts with one or more of said
27 interactive voice response applications, and wherein
28 said one or more interactive voice response applications
29 utilize said retrieved user-specific speech model via
30 said common speech recognition module for recognizing
31 speech of the known user, wherein speaker independent
32 models are used for a new user prior to updating said
33 user-specific speech models to make the new user into
34 a known user.

1 54. (previously presented) The system of claim 53, wherein
2 each of said interactive voice response applications includes an
3 executable component for execution by said hosting system, said
4 executable component comprising at least one of an executable
5 file, a Java Bean, a Corba-component, a compiled software
6 module, and a pre-compiled software module.

1 55. (previously presented) A method for allowing each of a
2 plurality of value-added service providers to set up an
3 interactive voice response application including an executable
4 component for execution by a voice portal hosting system
5 commonly used by said plurality of value-added service
6 providers, said voice response application for being used by a
7 plurality of users, comprising the steps of:

8 storing a plurality of user-specific speech models adapted
9 to known users for use by a common speech recognition
10 module;
11 identifying a user calling said system as a known user or a
12 new user;
13 retrieving the user-specific speech model of the known user
14 from said plurality of models or else retrieving a
15 speaker independent model for the new user and
16 generating a user-specific speech model for the new
17 user without using any training phase;
18 independently uploading, to said system, said interactive
19 voice response applications which provide interactive
20 voice response functionality;
21 the identified user interacting with one or more of said
22 interactive voice response applications; and
23 said one or more of said interactive voice response
24 applications using said retrieved user-specific speech
25 model or said retrieved speaker independent speech
26 model via said common speech recognition module for
27 executing on said hosting system for recognizing
28 speech of the known user or the new user,
29 respectively.

1 56. (previously presented) The system of claim 53, wherein
2 each of said interactive voice response applications includes an
3 executable component for execution by said hosting system, said
4 executable component comprising at least one of an executable
5 file, a Java Bean, a Corba-component, a compiled software
6 module, and a pre-compiled software module.

1 57. (previously presented) A method for allowing each of a
2 plurality of independent value-added service providers to set up
3 an interactive voice response applications each including an
4 executable component for execution by a voice portal hosting
5 system commonly used by said plurality of value-added service
6 providers and which can be used by a plurality of users, said
7 method comprising the steps of:

8 independently uploading, through a second telecommunication
9 network, said interactive voice response applications
10 to said system for providing interactive voice
11 response functionality,

12 storing a plurality of user-specific speech models adapted
13 to known users for use by a common speech recognition
14 module,

15 identifying a user calling said system as a known user or
16 new user,

17 retrieving the user-specific speech model of the known user
18 from said plurality of models or retrieving a speaker
19 independent model for a new user and adapting a user
20 specific speech model for the new user,

21 and

22 executing one or more of said voice response applications
23 in response to the user calling said system, said
24 executing including interacting with the user via said
25 common speech module using said retrieved user-
26 specific speech model for recognizing the speech of
27 the known user or using said retrieved speaker
28 independent model for the new user, wherein

29 said common speech models are adapted during each dialogue
30 between said users and any of said interactive voice
31 response applications without using any training
32 phase.

1 58. (previously presented) The method of claim 57, wherein
2 said interactive voice response applications include an
3 executable component for execution by said hosting system, said
4 executable component comprising at least one of an executable
5 file, a Java Bean, a Corba-component, a compiled software
6 module, and a pre-compiled software module.

1 59. (previously presented) A system for implementing the
2 method of claim 57.

1 60. (new) A method for allowing each of a plurality of
2 independent value-added service providers to set up an
3 interactive voice response applications each including an
4 executable component for execution by a voice portal hosting
5 system commonly used by said plurality of value-added service
6 providers and which can be used by a plurality of users, said
7 method comprising the steps of:

8 independently uploading, through a second telecommunication
9 network, said interactive voice response applications
10 to said system for providing interactive voice
11 response functionality, wherein said interactive voice
12 response applications include an executable component
13 for execution by said hosting system,

14 storing a plurality of user-specific speech models adapted
15 to known users for use by a common speech recognition
16 module,
17 identifying a user calling said system as a known user or
18 new user,
19 retrieving the user-specific speech model of the known user
20 from said plurality of models or retrieving a speaker
21 independent model for a new user and adapting a user
22 specific speech model for the new user,
23 executing one or more of said voice response applications
24 in response to the user calling said system, said
25 executing including interacting with the user via said
26 common speech module using said retrieved user-
27 specific speech model for recognizing the speech of
28 the known user or using said retrieved speaker
29 independent model for the new user, wherein
30 said common speech models are incrementally adapted during
31 each dialogue between said users and any of said
32 interactive voice response applications using
33 recording speech samples and without using any
34 training phase, and wherein
35 said common speech recognition module comprises a common
36 user profile database including user preferences.